

In the Specification:

Please replace paragraph [0024] with the following amended paragraph:

[0024] Due to the small size and light-weightedness of the temperature compensation device, it is possible to stabilize the optical characteristics further by putting the whole structure into a small temperature isolating compartment. FIG. 5 reveals such an embodiment. Besides sticking the optical fiber 16 with FBGs 15 on the composite plate 14, one side of the composite plate 14 is fixed in a tube 22 using sealing plastic 20. The other end of the composite plate 14 is ~~hanging freely a~~ cantilever free end. A weight 18 is fixed to the free end of the composite plate 14 to pre-tune the characteristic wavelength of the optical fiber 16 with FBGs 15 to a desired value. A vacuum is created in tube 22 before its other end is sealed up with plastic sealing 21. Both the tube 22 and plastic sealings 20 and 21 are made from low thermal conductivity and low thermal diffusivity materials. The inner surface 19 and outer surface 23 of the tube 22 are coated with aluminum which has a low emissivity. In this way, the FBGs 16 is largely shielded from environmental temperature changes as heat flow in the forms of radiation, convection and conduction is minimized as far as possible. This, together with the temperature compensation properties of the composite plate, will allow the characteristic wavelength of the FBGs to remain in an ultra-stable manner.